

At 350 Live, we are a team that has been presented with an issue about the 350 campaign and it is our responsibility to solve it. Our primary concern is to promote the 350 cause and the International Day of Climate Change, which is on the 24th of October, 2009. Also, the Dunedin Spring Food Festival is also on this date. As a group, we have decided to develop a game dubbed '*Carbon Invaders*', which is a spinoff of '*Space Invaders*' and '*Sneeze*' to promote 350. Part of the process we have been taught in this paper involved conducting a SoDIS active concerns report which identified our requirements and concerns that may hinder us from completing our aspirations. In this report, I will be discussing these concerns, the likelihood of them happening and how to overcome them, my own personal recommendations to the client, ethical issues at hand, and how this would relate to the Software Engineering Code of Ethics.

Lucky for us, we do not have any critical concerns that will hinder us from developing our interactive application. However, the SoDIS report has identified 8 minor concerns in our design that can be easily rectified and bypassed.

One of our minor concerns is the lack of time that we have to develop the game. The 24th of October is indeed the cut off date and we are already in early September. 350 Live is therefore quite motivated to complete the task in hand within the given time frame. We may need to downgrade final quality of the game to ensure we meet this timeframe. Given the time we will need to test the game for bugs, a recommended cut off date will be a week before the 24th of October. Because we are indeed short on time, I would refer to section 3.02 in the Software Engineering Code of Ethics, '*ensure proper and achievable goals and objectives for any project on which they work or impose*' and section 3.09 '*ensure realistic quantitative estimates of cost, scheduling, personnel, quality, and outcomes on any project on which they work or propose to work and provide an uncertainty assessment of these estimates*'. If 350 Live makes reasonable goals, we should be able to develop a robust product easily.

We also need to ensure that our game is not offensive to anyone. We identified that big carbon contributors may feel threatened by our game. We believe that the game will merely shape their understanding of the damage that they are imposing on the planet. Referring to section 1.02 and 1.06, which are respectively '*moderate the interests of the software engineer, the employer, the client, and the users with the public good*' and '*be fair and avoid deception in all statements, particularly public ones, concerning software of related documents, methods or tools*.' By relating back to these ethics, we can try to develop the game based around these ideologies but we will have to make the game explicit to a point. Carbon emissions are a serious issue and some large carbon contributors may be offended, but it must be stated.

As part of developing software, we must take into consideration the risk of possible flashing screen elements causing epileptics to experience seizures or normal users to experience headaches. A simple solution to this is to provide a splash screen at the start of the game with a warning stating that the game can cause seizures and headaches. Since our game does not contain any flashing elements, this should not be a big issue anyway. Referring to section 1.03 and 1.07, which are respectively '*approve software only if they have a well founded belief that it is safe, meets specifications, passes appropriate tests, and does not diminish quality of life, diminish privacy or harm the environment, The ultimate effect of the work should be to the public good*' and '*consider issues of physical disabilities, allocation of resources, economic disadvantage, and other factors that can diminish access to the benefits of software*'.

We must ensure that the game can actually run on the user's computer. With the majority of PC users on Windows, I personally believe that we can code the game easily, but the game will be limited to Windows users. If we wrote the game in Java or Flash for example, then all PC users of all Oses can use our game. Relating to section 3.10 which would identify this, '*ensure adequate testing, debugging and review of software and related documents on which they work*'.

We must make sure that our game is bug free and is incapable of causing system instability. While all outcomes cannot be emulated in the testing period, we must ensure that our game is robust and ships with an agreement stating that 350 Live is not responsible for any damage caused by this application. In fact, our application would not conduct malicious activity at all. This also relates to another concern we have, about the risk of our application acting as a gateway from viruses. These are things we cannot control. All 350 Live can do is offer patches if and when these circumstances arise.

The game may not be found entertaining by a select group of our users. While we cannot personally control what the market likes, hopefully by those individuals that don't like the game, they have still gone away with a positive message about 350.

As shown, these concerns are fairly minor and can easily be overcome by 350 Live.